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IN THE CLAIMS:

Please amend claims 1-13 and 15, cancel claim 14 and add new claim 16 as follows:

1. (Currently Amended) A method of optically detecting the three-dimensional shape of an interior space defined by an inner wall, ~~characterized in that said~~ comprising the steps of:

providing said interior space ~~is provided~~ with an elastic envelope (2) in snug contact with the inner wall and marked with marks (3) facing the inside of the space and adapted to be evaluated photogrammetrically[[,]] ;

~~in that~~ producing a number of overlapping image recordings of said interior space marked in this way ~~are produced~~ with the aid of one or more imaging devices (4, 9)[[,]]; and,

~~in that~~ using photogrammetrical methods ~~are used~~ for determining from said recordings the three-dimensional shape of that part of said interior space that was detected by said overlapping recordings.

2. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein the side of the marked envelope (2) facing the inner wall is provided with a means adhering to said inner wall prior to insertion into the interior space.

3. (Currently Amended) The method according to claim 2, ~~characterized in that~~ wherein an inflatable cover is inserted into the marked envelope (2), said envelope (2) is placed into the interior space with said cover and there said envelope is pressed against the inner wall of the interior space to be detected by admitting internal pressure into said cover such that it is in snug contact with said inner wall, and in that afterwards said cover is relieved from pressure and removed, in order to make room for the insertion of one or more imaging devices.

4. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the interior space constitutes the interior of a product (1) which is in contact with the human body during use.

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5. (Currently Amended) The method according to claim 4, ~~characterized in that~~ wherein the interior space is the interior of footwear ~~(1)~~.

6. (Currently Amended) The method according to claim 4, ~~characterized in that~~ wherein the interior space is the interior of a prosthesis funnel for receiving a limb stump .

7. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the interior space is the interior of an orifice of the body.

8. (Currently Amended) The method according to any of claims 1 to ~~7, characterized in that~~ 3, wherein a video camera ~~(4)~~ is used as imaging device and that the overlapping image recordings of the interior space are recorded in the form of one or more video sequences.

9. (Currently Amended) The method according to any of claims 1 to 3 ~~and 8, characterized in that~~ , wherein the imaging device(s) ~~(4)~~ is/are rotated axially and successively record(s) both axially and radially overlapping recordings of the marked interior space.

10. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the imaging device(s) ~~(4)~~ inside the interior space is/are put into the different overlapping recording positions.

11. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the interior space is mapped on the imaging device ~~(9)~~ in radial bands via a collar-shaped mirror ~~(8)~~.

12. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the imaging device(s) ~~(9)~~ is/are guided in the interior space by spacers.

13. (Currently Amended) The method according to any of claims 1 to 3, ~~characterized in that~~ wherein the overlapping image fields are transmitted from the interior space to one or more imaging device(s) ~~(9)~~ located outside the interior space via an endoscopic system.

14. (Canceled)

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15. (Currently Amended) The arrangement according to claim ~~14~~ 16, characterized in that the thin elastic envelope ~~(2)~~ is made of an elastic knitwear, a knitted fabric or a woven fabric.

16. (New) Apparatus for optically detecting the three-dimensional shape of an interior space, comprising a thin, elastic envelope provided with marks adapted to be photogrammetrically evaluated, said envelope being adapted to be placed into an interior space to be scanned three-dimensionally, so that said envelope snugly lines the wall defining said interior space, one or more imaging devices that can be guided through the interior space in such a way that they record overlapping image recordings of said marked thin envelope, and a computer, to which image sequences of the image recordings are transmitted by said imaging devices and which forms lists of homologous marks from the images of the image sequences using an image processing program, and which calculates from the list of homologous marks the 3D-coordinates of the interior space at the positions of these marks using a photogrammetrical program.